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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,007	08/20/2003	Kazunori Bannai	241318US2	4866

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EXAMINER	
AL HASHIMI, SARAH	
ART UNIT	**PAPER NUMBER**
2853	

NOTIFICATION DATE	DELIVERY MODE
12/26/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/644,007	BANNAI ET AL.	
	Examiner	Art Unit	
	Sarah Al-Hashimi	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-36* is/are pending in the application.

4a) Of the above claim(s) *7-36* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,3,4 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirai (US 6,148,168).

Hirai teaches

Claim 1: adjusting a position at which one of said image carriers is irradiated with an optical beam of a laser light emitting element in a sub-scanning direction to correct said color shift while said optical beam is irradiated from said optical writing device onto said image carriers to develop the latent one-color images (col 16 lines 10-21 “the pattern image is composed of multiple lines and the line width is differentiated from one line to the next. When a pattern image of lines having the same line width is used, it is impossible to detect color misregistration when the two pattern images are superimposed with a shift of just one line pitch from one to another because the displaced lines overlap. In accordance with the present invention, it is possible to correctly detect color misregistration even when the pattern image is displaced at one line pitch from the other, and hence it is possible to perform a reliable correction of color misregistration”), said adjusting including,

reading a pattern written on said image carriers (fig 1 #230);

detecting the color shift among the developed one-color images (fig 1 #232); and

driving a light emitting position of the laser light emitting element in a subscanning direction by rotatably driving the laser light emitting element, which is rotatably held by a holding member, about a rotational central axis of the holding member with an optical axis of the optical beam being inclined with respect to the rotational central axis of the holding member, based on the result of the reading (fig 1 #240); and

substantially aligning the rotational central axis of the holding member with the optical axis of the optical beam at a point at which the optical beam is deflected off of a mirror towards one of the image carriers (fig 1 # 243).

Claim 3: setting a write timing at which said pattern is written based on a timing at which a reference point provided on one of said image carriers is detected (col 14 lines 50-56 “the timing control means performs control in such a sequence that one image forming station to be the reference, in the image forming portion, forms a pattern image; the image forming station to be adjusted forms another pattern image, which is superimposed over the pattern image formed by the reference image forming station”).

Claim 4: setting a write timing at which said pattern is written based on a timing at which a reference point provided on an intermediate transfer element is detected (col 2 lines 59-67 and col 3 lines 1-5 “a timing control means which performs control in such a sequence that one image forming station to be the reference, in the image forming portion, forms a pattern image; the image forming station to be adjusted forms another

pattern image, which is superimposed over the pattern image formed by the reference image forming station; the pattern image density measuring means measures the density of the superimposed pattern image so as to judge the superimposed state of the pattern image based on the measured density; and the image forming station to be adjusted is controlled so as to perform image forming at a timing so that the measured density will fall within a predetermined permissible density range").

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (US 6,148,168) in view of Yoshino (US 6,342,963).

Hirai does not teach but Yoshino teaches:

Claim 5: correcting a write timing at which said optical writing device writes an image; correcting the position of the optical beam, wherein said correcting a writing timing and said correcting the position of the optical beam are executed concurrently (col 19 lines 65-67 "write timing by laser beam "Y" is changed), and while setting the laser beam "K" as a reference, the side registration position for another color is changed").

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Hirai to incorporate correcting a write timing at which said optical writing device writes an image; correcting the position of the optical beam,

wherein said correcting a writing timing and said correcting the position of the optical beam are executed concurrently as taught by Yoshino to improve the accuracy of imaging by not comprising a time delay between writing time and beam position with a time delay.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (US 6,148,168) in view of Yoshino (US 6,342,963) as applied to claim 5 above, and further in view of Tada (US 6,115,165).

Hirai in view of Yoshino does not teach but Tada teaches:

Claim 6: said correcting the write timing includes correcting a portion corresponding to a quotient derived by dividing an amount of misregistration by a dot pitch, and said correcting the position of the optical beam includes correcting a portion corresponding to a residual resulting from the dividing of the amount of misregistration by the dot pitch (col 2 lines 55-57 "h is equal to a quotient (a natural number) obtained by dividing the interval r between the light beams by the interval P between the scanning lines").

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Hirai in view of Yoshino to further incorporate said correcting the write timing includes correcting a portion corresponding to a quotient derived by dividing an amount of misregistration by a dot pitch, and said correcting the position of the optical beam includes correcting a portion corresponding to a residual resulting from the dividing of the amount of misregistration by the dot pitch as taught by Tada in order to ensure the beam is positioned accurately when imaging and appropriately taking the error into account.

Response to Arguments

6. Applicant's arguments filed 10/01/2008 have been fully considered but they are not persuasive.

Applicant argues with respect to claim 1 that "driving a light emitting position of the laser light emitting element in a subscanning direction by rotatably driving the laser light emitting element, which is rotatably held by a holding member, about a rotational central axis of the holding member" is not taught by the prior art.

Examiner does not concede. Fig 1 #240 is a rotating polygon mirror. The laser light will be rotatably driven as it is deflected off the facets. The polygon mirror is the holding member because it serves the function of driving the light by receiving it and deflecting. The amendment to claim 1 has also been addressed in the rejection of claim 1 above. All rejections remain instated.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Al-Hashimi whose telephone number is 571 272 7159. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272 2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PAIR or Public PAIR. Status information for unpublished applications is available through PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SA/

/Manish S. Shah/

Primary Examiner, Art Unit 2853